

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 99.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019189**Date Inspected:** 11-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC)**Location:** Shanghai, China**CWI Name:** N/A**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector Mr. S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) at Trial Assembly Areas

Tower Grillage (Lift 5) - East

This QA Inspector witnessed final bolt tension verification on bolts connecting the Angles to the Tower Grillage East, Transverse and Longitudinal Stiffeners at the Top Face. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00608 Dated January 11, 2011.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300032 and the final torque value established was 1673 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300033 and the final torque value established was 1553 N-m.

The bolt sizes used were M30 x 210 RC Lot # DH4DM300034 and the final torque value established was 1540

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N-m.

The bolt sizes used were M30 x 230 RC Lot # DH4DM300035 and the final torque value established was 1446 N-m.

The bolt sizes used were M27 x 210 RC Lot # DH4DM270001 and the final torque value established was 847 N-m.

The bolt sizes used were M27 x 160 RC Lot # DHGM270022 and the final torque value established was 873 N-m.

The bolt sizes used were M27 x 130 RC Lot # DHGM270008 and the final torque value established was 887 N-m.

The bolt sizes used were M27 x 120 RC Lot # DHGM270020 and the final torque value established was 847 N-m.

The Manual Torque wrench used was Serial No. XO2-747.

Tower Grillage (Lift 5) - West

This QA Inspector witnessed final bolt tension verification on bolts connecting the Angles to the Tower Grillage West, Transverse and Longitudinal Stiffeners at the Top Face. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00608 Dated January 11, 2011.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300032 and the final torque value established was 1673 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300033 and the final torque value established was 1553 N-m.

The bolt sizes used were M30 x 210 RC Lot # DH4DM300034 and the final torque value established was 1540 N-m.

The bolt sizes used were M30 x 230 RC Lot # DH4DM300035 and the final torque value established was 1446 N-m.

The bolt sizes used were M27 x 210 RC Lot # DH4DM270001 and the final torque value established was 847 N-m.

The bolt sizes used were M27 x 160 RC Lot # DHGM270022 and the final torque value established was 873 N-m.

The bolt sizes used were M27 x 130 RC Lot # DHGM270008 and the final torque value established was 887 N-m.

The bolt sizes used were M27 x 120 RC Lot # DHGM270020 and the final torque value established was 847 N-m.

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The Manual Torque wrench used was Serial No. XO2-747.

Tower Grillage (Lift 5) - North

This QA Inspector witnessed final bolt tension verification on bolts connecting the Angles to the Tower Grillage North, Transverse and Longitudinal Stiffeners at the Top Face. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00608 Dated January 11, 2011.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300032 and the final torque value established was 1673 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300033 and the final torque value established was 1553 N-m.

The bolt sizes used were M30 x 210 RC Lot # DH4DM300034 and the final torque value established was 1540 N-m.

The bolt sizes used were M30 x 230 RC Lot # DH4DM300035 and the final torque value established was 1446 N-m.

The bolt sizes used were M27 x 210 RC Lot # DH4DM270001 and the final torque value established was 847 N-m.

The bolt sizes used were M27 x 160 RC Lot # DHGM270022 and the final torque value established was 873 N-m.

The bolt sizes used were M27 x 130 RC Lot # DHGM270008 and the final torque value established was 887 N-m.

The bolt sizes used were M27 x 120 RC Lot # DHGM270020 and the final torque value established was 847 N-m.

The Manual Torque wrench used was Serial No. XO2-747.

Tower Grillage (Lift 5) - South

This QA Inspector witnessed final bolt tension verification on bolts connecting the Angles to the Tower Grillage South, Transverse and Longitudinal Stiffeners at the Top Face. Inspected the bolt tensioning on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00608 Dated January 11, 2011.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300032 and the final torque value established was 1673 N-m.

The bolt sizes used were M30 x 200 RC Lot # DH4DM300033 and the final torque value established was 1553 N-m.

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The bolt sizes used were M30 x 210 RC Lot # DH4DM300034 and the final torque value established was 1540 N-m.

The bolt sizes used were M30 x 230 RC Lot # DH4DM300035 and the final torque value established was 1446 N-m.

The bolt sizes used were M27 x 210 RC Lot # DH4DM270001 and the final torque value established was 847 N-m.

The bolt sizes used were M27 x 160 RC Lot # DHGM270022 and the final torque value established was 873 N-m.

The bolt sizes used were M27 x 130 RC Lot # DHGM270008 and the final torque value established was 887 N-m.

The bolt sizes used were M27 x 120 RC Lot # DHGM270020 and the final torque value established was 847 N-m.

The Manual Torque wrench used was Serial No. XO2-747.

Note: Please reference the pictures attached for more comprehensive details(for Tower Grillage (Lift 5) - East, West, North and South.

Segment 12BW to Segment 12CW (U-Rib to U-Rib)

This QA Inspector performed Dimension Control Inspection for measuring offset along with ABF QA Inspector on the U-Rib to U-Rib from Counter Weight side towards Cross Beam side at a total of 39 locations on Segment 12BW to Segment 12CW between Panel Points (PP) 114 to PP 115 at the following locations:

The offset was measured within 50mm from the Deck Panel on U-Rib on the South and North side. The QA Inspector measured the Offset using 1(One) Meter Straight Edge.

The measurements were recorded in the Dimension Control Plan (DCP) on a separate form and submitted to the Lead Inspector and Engineer for review and disposition.

Lift 11 East (X37B Road Barrier Brackets, at Corner Assembly)

This QA Inspector performed Dimension Control Inspection for the Segment 11AE, Segment 11BE, Segment 11CE, Segment 11DE and Segment 11EE after installing the Retro-fit plates and measured the distance between Road Barrier bolt holes drilled at X37B from deck panel to the cope hole at X37B bracket. Road Barrier X37B installed at Corner Assembly. ZPMC personnel's performed this rectification work against the Request for Information(RFI) Report # ABF-RFI-001985R01 dated August 18, 2010.

Observed Retro-fit plates are installed at East and West side of the Road Barrier Brackets X37B, at Cross Beam side at the following locations.

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At Panel Points(PP) PP 97.75(Retro-fit plate installed at X37B Bracket), Cross Beam side.

At Panel Points(PP) PP 98.25(Retro-fit plate installed at X37B Bracket), Cross Beam side.

At Panel Point(PP) 103.75(Retro-fit plate installed at X37B Bracket), Cross Beam side.

At Panel Point(PP) PP 104.25(Retro-fit plate installed at X37B Bracket), Cross Beam side.

At Panel Point(PP) PP 105.25(Retro-fit plate installed at X37B Bracket), Cross Beam side.

At Panel Point(PP) PP 106.75(Retro-fit plate installed at X37B Bracket), Cross Beam side.

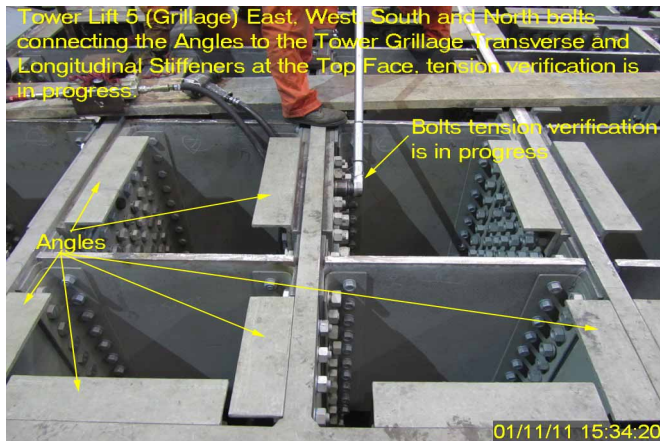
At Panel Point(PP) PP 107.75(Retro-fit plate installed at X37B Bracket), Cross Beam side.

At Panel Point(PP) PP 108.25 and PP 108.75 (Retro-fit plate installed at X37B Bracket), Cross Beam side.

Note: Observed 9(Nine) locations retro-fit plates for X37B Brackets are installed in total for Lift 11 West at Cross Beam side.

The observations were informed to Lead Inspector Mr. Mark Miller and Structural Steel Material Representative (SMR) Mr. Eric Tsang for closing out the punch list.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



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Summary of Conversations:

No relevant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 150000422372, who represents the Office of Structural Materials for your project.

Inspected By:	Math,Manjunath	Quality Assurance Inspector
Reviewed By:	Dsouza,Christopher	QA Reviewer
